

REMARKS/ARGUMENTS

The drawings were objected to under 37 CFR 1.83(a). Claims 11, 13 to 17 and 19 to 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Quadracci (U.S. Patent No. 5,108,531) in view of Heikkila et al. (U.S. Patent 6,311,410).

Claims 11 and 19 are hereby amended. Support is found in the specification for example at paragraphs [0012].

The specification is hereby been amended at paragraphs [0021] and [0022] and a new paragraph [0019.1] is added to indicate where the at least one steam-heatable roller, the at least one water-heatable roller, the at least one microwave source, the at least one infrared light source and the device for producing a lateral tension in the web substrate are shown in the drawings. No new matter has been added.

Submitted herewith are one replacement sheet of drawings, which include changes to Figs. 1 and 2. Support is found in the original claims and at paragraphs [0011] and [0020] of the specification as filed, for example.

Reconsideration of the application is respectfully requested.

Objections to the Drawings

The drawings were objected to under 37 CFR 1.83(a) for failing to show every feature of the invention specified in the claims.

The specification is hereby been amended at paragraphs [0021] and [0022] and a new paragraph [0019.1] is added to indicate where the at least one steam-heatable roller, the at least one water-heatable roller, the at least one microwave source, the at least one infrared light source and the device for producing a lateral tension in the web substrate are shown in the drawings. No new matter has been added.

Submitted herewith are two replacement sheets of drawings, which include changes to Fig. 2 and a new Fig. 5. The replacement sheet including Fig. 2 replaces the replacement sheet including Fig. 2 submitted on April 3, 2009. In Fig. 2, references numerals 38' and 38'' are hereby added indicating a steam-heatable roller 38' and a water-heatable roller 38''. Reference numeral 44' is hereby added depicting a microwave source 44'. New Fig. 5 is hereby submitted and includes an infrared red source 44''. Support for new Fig. 5 may be found in the specification at paragraph [0021] and in the original claims. No new matter has been entered.

Withdrawal of the objections to the drawings is respectfully requested.

35 U.S.C. §103(a) Rejections

Claims 11, 13 to 17 and 19 to 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Quadracci in view of Heikkila et al.

Quadracci discloses a web offset stereographic printing system 10 including printing units 20, a dryer 14 and a chill roll 15 upstream of printing units 20, and a dryer 22 and chill roll 24 downstream of printing units 20. (Col. 2, lines 55 to 68).

Heikkila et al. discloses a device for drying a coated paper web. (Col. 1, lines 6 to 32). The specific aim is to heat the web to the drying temperature more economically. (Col. 2, lines 13 to 15). In one embodiment, an air dryer 30 is divided into segments, with a first segment 32 forming a web heating unit and second, third and fourth segments 34, 36, 38 forming evaporation units. (Fig. 5; col. 5, lines 37 to 40). Fresh air is supplied to the evaporation segments 34, 36, 38 by aggregates 40, 42, 44 and exhaust air from all of the evaporation segments is brought together in an aggregate 46 to form combined exhaust air. (Col. 5, lines 42 to 45). Some of the combined humid exhaust air is supplied as replacement air to the first segment 32 of the dryer and some is removed from the dryer by the aggregate 45. (Col. 5, lines 45 to 48).

Claim 11, as amended, recites “[a] web-fed rotary press for printing on a web substrate using heat-set inks in an offset printing process comprising:

at least one print unit;

at least one dryer; and

at least one additional device for inputting heat into the web substrate and expelling moisture from the web substrate, the at one additional device for inputting heat being positioned upstream from the at least one print unit along a path of the web substrate through the web fed rotary press, the at least one additional device for inputting heat being fed by energy from the exhaust air from the dryer.”

It is respectfully submitted that neither Heikkila et al. nor Quadracci, alone or in combination, discloses “at least one additional device for inputting heat into the web substrate and for expelling moisture from the web substrate . . . the at least one additional device for

inputting heat being fed by energy from the exhaust air from the dryer" as recited in claim 11. Dryer 14 of Quadracci is different from the "at least one additional device" of claim 11 because dryer 14 is not fed by energy from the exhaust air from dryer 22. Also, first segment 32 of Heikkila et al. is different from the "at least one additional device" of claim 11 because first segment 32 is not for expelling moisture from the web, but is merely for heating the web so that segments 34, 36, 38 can expel moisture from the web.

Furthermore, one of ordinary skill in the art would not have had any reason to have modified the printing system 10 of Quadracci in view of Heikkila et al. to include the "at least one additional device" of claim 11. Heikkila et al. teaches feeding the evaporating segments 34, 36, 38 with fresh air and then feeding some of the exhaust air of segments 34, 36, 38 to an adjacent heating segment 32. Evaporating segments 34, 36, 38 need to be adjacent to heating segment 32 for dryer 30 of Heikkila et al. to work properly, otherwise the web would just be heated and not dried. Quadracci on the other hand teaches two chill rollers 15 arranged downstream of dryer 14. Using heating segment 32 in place of dryer 14 of Quadracci would result in a web 30 which is heated, without evaporation, and then chilled by rollers 15, thereby causing condensation humidity. Web 30 would then be even more humid when entering print units 20, a result which is clearly contrary to the intended purpose of Quadracci. Thus, Quadracci and Heikkila et al. are not combinable to disclose the "at least one additional device" of claim 11.

Based on the foregoing, withdrawal of the rejection under 35 U.S.C. 103(a) of claim 11 and its dependent claims 13 to 17 is respectfully requested.

Claim 19, as amended, recites "[a] method for minimizing fluting in a web-fed rotary press for printing on a web substrate using heat-set inks in an offset printing process comprising the steps of:

guiding the web substrate through the web-fed rotary press along a path;
printing on the web substrate by at least one print unit;
drying the web substrate once imprinted with a dryer at a first location; and
supplying heat to the web substrate to expel moisture from the web substrate at least at one other location along the path through the web-fed rotary press, the at least at one other

location being positioned upstream from the at least one print unit along the path, the heat being generated from energy from the exhaust air from the dryer.”

It is respectfully submitted that neither Heikkila et al. nor Quadracci, alone or in combination, discloses “supplying heat to the web substrate to expel moisture from the web substrate at least at one other location along the path through the web-fed rotary press, the at least at one other location being positioned upstream from the at least one print unit along the path, the heat being generated from energy from the exhaust air from the dryer” as recited in claim 19. Dryer 14 of Quadracci is not fed by energy from the exhaust air from dryer 22 and thus Quadracci does not disclose the “supplying” step of claim 19. Also, first segment 32 of Heikkila et al. does not for expel moisture from the web and does not generate heat from energy from exhaust air from a dryer that is downstream of a print unit. Thus, Heikkila et al. also does not disclose the “supplying” step of claim 19.

Furthermore, one of ordinary skill in the art would not have had any reason to have modified the printing system 10 of Quadracci in view of Heikkila et al. to perform the “supplying” of claim 11. Heikkila et al. teaches feeding the evaporating segments 34, 36, 38 with fresh air and then feeding some of the exhaust air of segments 34, 36, 38 to an adjacent heating segment 32. Evaporating segments 34, 36, 38 need to be adjacent to heating segment 32 for dryer 30 of Heikkila et al. to work properly, otherwise the web would just be heated and not dried. Quadracci on the other hand teaches two chill rollers 15 arranged downstream of dryer 14. Using heating segment 32 in place of dryer 14 of Quadracci would result in a web 30 which is heated, without evaporation, and then chilled by rollers 15, thereby causing condensation humidity. Web 30 would then be even more humid when entering print units 20, a result which is clearly contrary to the intended purpose of Quadracci. Thus, Quadracci and Heikkila et al. are not combinable to disclose the “supplying” step of claim 19.

Based on the foregoing, withdrawal of the rejection under 35 U.S.C. 103(a) of claim 19 and its dependent claims 20 to 24 is respectfully requested.

CONCLUSION

The present application is respectfully submitted as being in condition for allowance and applicants respectfully request such action.

Respectfully submitted,
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